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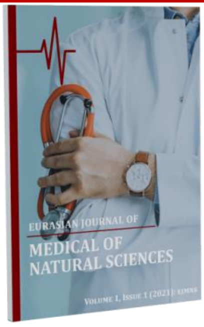

COMPARATIVE ANALYSIS OF THE ABUTMENT–GINGIVA INTERFACE USING VARIOUS SURFACE TREATMENT METHODS

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ABSTRACT

In modern dental implantology, improving the quality of the abutment–gingiva interface is of great importance. Proper surface treatment of the abutment–gingival junction helps create a strong and biologically compatible connection with the gingiva, which ensures the long-term success of the implant and prevents inflammation of the surrounding soft tissues. An ideal abutment–gingiva interface is crucial not only for mechanical stability but also for maintaining the aesthetic and functional condition of the soft tissues. Therefore, a detailed investigation of the influence of various surface treatment methods on this interface is necessary. Today, mechanical, chemical, and plasma surface treatment methods are widely used. However, comparative studies evaluating their effectiveness remain insufficient. This study is of practical relevance in the field of implantology and prosthetic dentistry, aiming to improve the quality of the abutment–gingiva interface and thus enhance the longevity of dental implants. The results of the comparative evaluation will assist dental professionals in selecting appropriate abutment treatment methods, helping to preserve the integrity of the gingiva and surrounding soft tissues, reduce infectious complications, and achieve superior aesthetic outcomes.

TURLI ISHLOV BERISH USULLARI BO`YICHA ABATMENT VA MILK O`RTASIDAGI BOG`LANISHNING QIYOSIY TAQQOSLASH

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ABSTRACT
Zamonaviy dental implantologiya sohasida abatment va milk o'rtasidagi bog'lanish sifatini yaxshilash katta ahamiyatga ega. Abatment-milk sathining to'g'ri ishlov berilishi milk bilan mustahkam va biologik jihatdan mos bog'lanish yaratishga yordam beradi, bu esa implantning uzoq muddatli muvaffaqiyatini ta'minlaydi va atrofdagi yumshoq to'qimalarning yallig'lanishidan saqlaydi. Abatment vamilk o'rtasidagi interfeysning mukammal shakllanishitish implantatsiyasida nafaqat mexanik barqarorlik, balki yumshoq to'qimalarning estetik va funktsional holatini ham ta'minlaydi. Shu sababli, turli ishlov berish usullarining abatment-milk bog'lanishiga ta'sirini batafsil o'rganish zarur. Bugungi kundamexanik, kimyoviy va plazma bilan ishlov berishusullari keng qo'llanilmoqda, ammo ularning samaradorligini to'liq baholash uchun qiyosiy tadqiqotlar yetarli emas. Mazkur tadqiqot implantologiya va ortopedikstomatologiya sohasida amaliy ahamiyatga ega bo'lib, abatment va milk o'rtasidagi bog'lanish sifatini oshirish orqali implantlarning uzoq muddatli xizmatqilishini ta'minlashga qaratilgan. Qiyosiy baholashnatijalari stomatologlarga abatmentga ishlov berishusullarini tanlashda yordam beradi, bu esa milk vaatrofdagi yumshoq to'qimalarning yaxlitligini saqlabqolish, infeksion asoratlarni kamaytirish va estetik jihatdan mukammal natijalarga erishish imkonini beradi.

Tadqiqod maqsadi. Turli sirt materiallariga ega bo'lgan va har xil ishlov berilgan implant abatmentlarining milk epiteliyasiga biologik birikish darajasini eksperimental va statistik jihatdan solishtirish.

Xususan, quyidagi uchta abatment sirtiga ishlov berish usuli taqqoslanadi:

1. Chinni (porcelain) + qum purkagich(peskostroy) bilan ishlov berilgan abatment
2. Keramika + qum purkagich(peskostroy) bilan ishlov berilgan abatment
3. Standart abatment + faqta qum purkagich (peskostroy) ishlovi bilan

Maqsad — bu sirtlardan qaysi biri epiteliy bilan eng yaxshi biologik yopishish (attachment) hosil qilishini aniqlash va klinik qo`llash uchun optimal variantni tavsiya qilish.

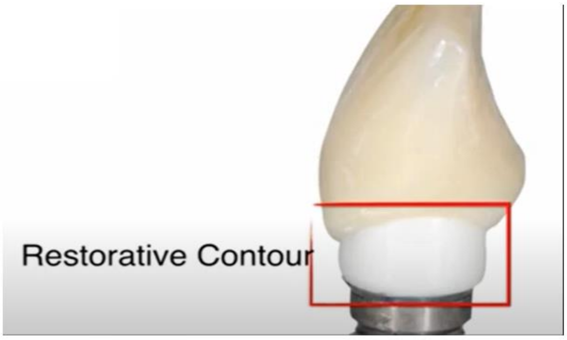
Tadqiqod usullari va materiallari:

- Tadqiqot turi: Klinik, mikrobiologik, rentgenologik, statistic

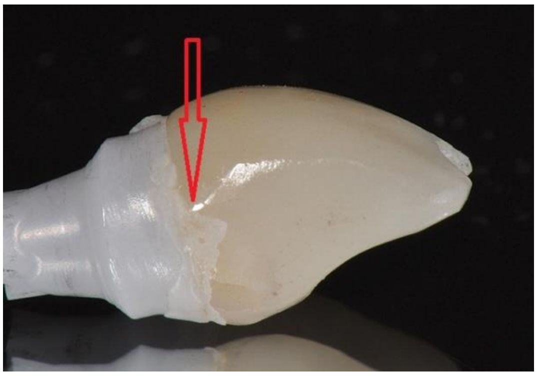
- Ishtirokchilar: 15 ta sog'lom bemor (yoshi 25–45; 7ta ayol va 8ta erkak), har biriga bir xil turdagi implant o'rnatilgan.

- Guruhlar:

- Guruh 1: Chinni +qum purkagich (peskostroy) abatment (n=5; 3ta ayol, 2ta erkak)

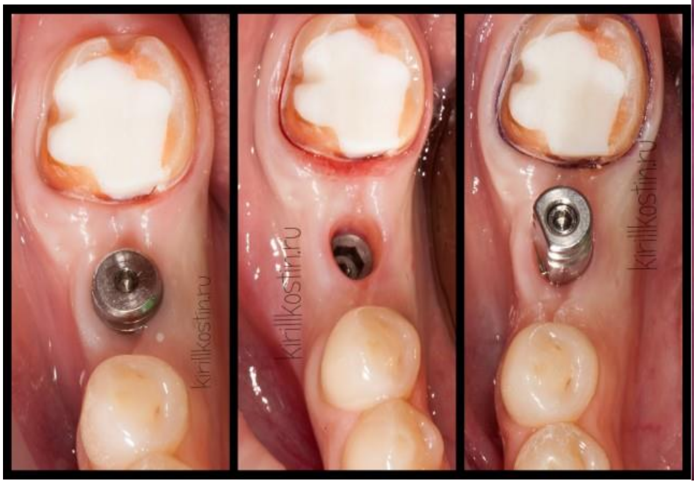


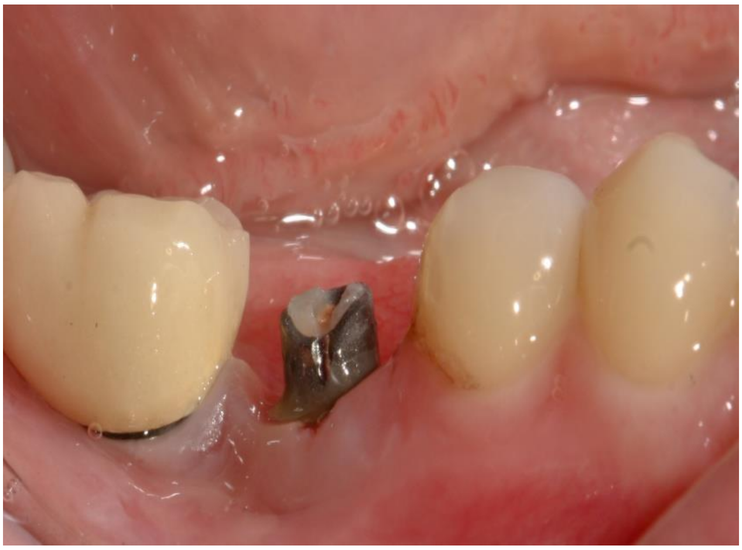
- Guruh 2: Keramika + qum purkagich (peskostroy) abatment (n=5; 2ta ayol, 4ta erkak)



- Guruh 3: Standart titan + qum purkagich (peskostroy) abatment (n=5; 2ta ayol, 2ta erkak)

- Baholash muddati: 6 haftadan soʻng milk biopsiyasi orqali epitelial attachment uzunligi mikroskop ostida oʻlchandi
- Oʻlchov birligi: Millimetr (mm)





Olingan kasallardan 10tasida rentgentgenologik tekshiruv o`tkazildi

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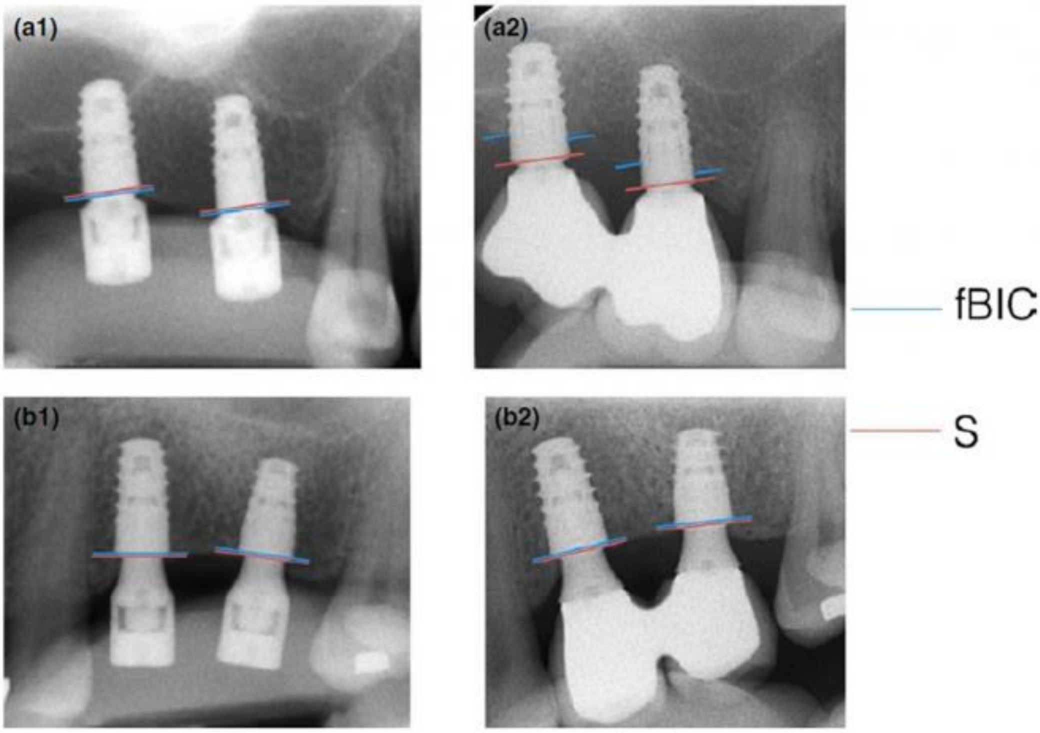

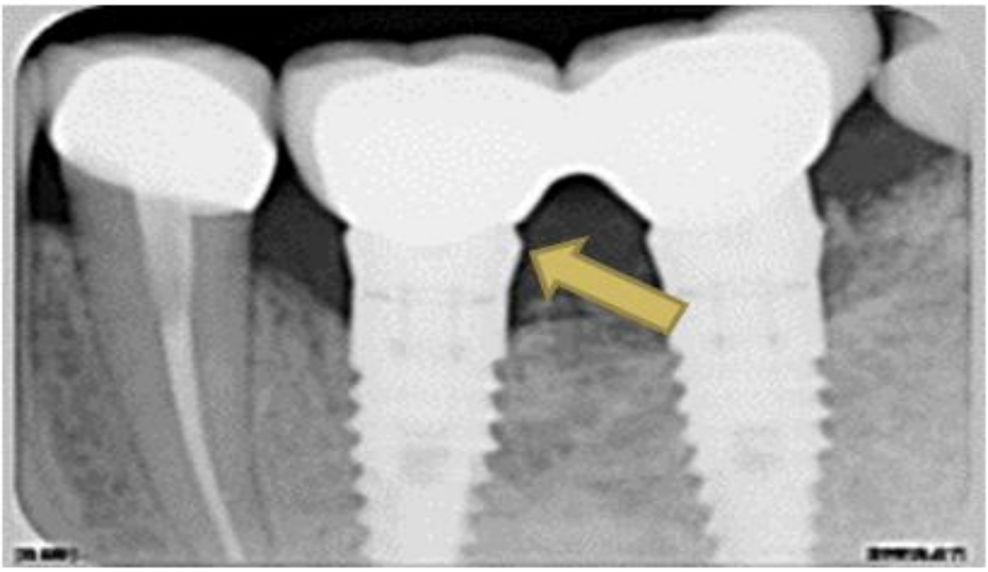

Natijalar:

Quyidagi jadvalda turli materiallardagi abatmentlar uchun epitelial attachment uzunligi ko‘rsatilgan:

Guruh	Epitelial attachment uzunligi (EAU, mm)	Standart og‘ish
Chinni + peskostruy	2.4 mm	±0.2 mm
Keramika + peskostruy	2.0 mm	±0.3 mm
Titan + peskostruy	1.6 mm	±0.4 mm

Statistik tahlil (ANOVA) chinni va titan abarmentlar orasidagi farqni $p < 0.05$ darajasida ishonchli deb topdi.

Muhokama: Olingan natijalar shuni koʻrsatdiki, peskostroy ishlovidan soʻng chinni qoplamali abatmentlarda epitelial attachment uzunligi eng katta boʻldi. Bu esa chinni yuzaning yumshoq toʻqimalar bilan biokompatibilligini koʻrsatadi. Keramika yuzalarda bu natija oʻrtacha boʻlsa, oddiy titan yuzalarida attachment qisqaroq shakllangan. Attachment uzunligining koʻp boʻlishi — yalligʻlanishga qarshi barqaror biologik muhr hosil boʻlishiga ijobiy taʼsir qiladi. Peskostroy ishlovi yuzaning mikro-xiralik darajasini oshirib, fibroblast va epiteliy hujayralarining yopishishini kuchaytiradi. Biroq, materialning oʻzi (chinni vs. titan) ham bu jarayonga sezilarli darajada taʼsir koʻrsatadi.

Xulosa: Qum purkagich (peskostroy) bilan ishlov berilgan chinni qoplamali abatmentlar, epitelial attachment hosil qilishda eng yuqori biologik moslikni koʻrsatdi. Bunday attachment uzunligining koʻpayishi implant atrofida yalligʻlanish xavfini kamaytiradi va uzoq muddatli muvaffaqiyatni oshiradi. Shu sababli, klinik amaliyotda transmukozal sohalarda aynan chinni+peskostroy abatmentlardan foydalanish tavsiya etiladi.

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